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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,390	09/24/2003	Stephen B. Roscoe	58625US002	3951

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EXAMINER	
NEGIN, RUSSELL SCOTT	
ART UNIT	PAPER NUMBER
1631	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/15/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/669,390	ROSCOE ET AL.	
	Examiner	Art Unit	
	Russell S. Negin	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) *25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 13 December 2006 has been entered.

Claims examined in this Office Action are claims 1-24.

Claim Rejections - 35 USC § 112

Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the excipient package" in lines 13-14 of the claim. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination, the term will be assumed to mean excipient compounds in the composition.

Claim Rejections - 35 USC § 103

The rejections of claims 1-5, 8, and 10-24 under 35 U.S.C. 103(a) as being unpatentable over Katz et al. [Journal of Pharmaceutical Sciences, 1965, volume 54, pages 591-594] in view of Loftsson et al. [Drug Development and Industrial Pharmacy, 1994, volume 20, pages 1699-1708] in view of Tayar et al. [Journal of Pharmaceutical Science, volume 80, 1991, pages 590-598] are withdrawn due to amendments made by applicants to the set of claims filed on 13 December 2006.

The rejections of claims 1 and 6-7 under 35 U.S.C. 103(a) as being unpatentable over Katz et al. in view of Loftsson et al. in view of Tayar et al. as applied to claims 1-5, 8, and 10-24 above, and further in view of Garcia-Ochoa et al. [Chemistry- A European Journal, 1999, volume 5, pp. 897-901] are withdrawn due to amendments made by applicants to the set of claims filed on 13 December 2006.

The rejections of claims 1 and 8-9 under 35 U.S.C. 103(a) as being unpatentable over Katz et al. in view of Loftsson et al. in view of Tayar et al. in view of Garcia-Ochoa et al. as applied to claims 1 and 6-7 above, and further in view of Colarusso et al. [Biophysical Journal; February 2002; volume 82, pages 752-761] are withdrawn due to amendments made by applicants to the set of claims filed on 13 December 2006.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

35 U.S.C. 103 Rejection #1:

Claims 1-5, 8, and 10-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz et al. [Journal of Pharmaceutical Sciences, 1965, volume 54, pages 591-594] in view of Tayar et al. [Journal of Pharmaceutical Science, volume 80, 1991, pages 590-598] in view of Loftsson et al. [Drug Development and Industrial Pharmacy, 1994, volume 20, pages 1699-1708] in view of Loftsson et al. [Drug Development and Industrial Pharmacy, 1997, volume 23, pages 473-481] in view of Lipinski et al. [Advanced Drug Delivery Reviews, volume 23, 1997, pages 3-25]. The second Loftsson et al. reference is referred to as "Loftsson et al. (1997)" throughout this Office action.

Claims 1-5, 8, and 10-24, state:

1. A method of formulating a pharmaceutical composition comprising:
comparing parameters of at least one pharmaceutical and a plurality of compounds, wherein the parameters consist of at least log(P) and molecular weight;

based on the compared parameters, choosing at least one model compound from the plurality of compounds for each pharmaceutical, wherein the at least one model compound is different from the at least one pharmaceutical;

providing at least one model compound-excipient formulation comprising at least one model compound and at least one excipient;

measuring the diffusion of a model compound of at least one model compound-excipient formulation across at least one membrane;

choosing a model compound-excipient formulation based on the measured model compound diffusion; and

combining components comprising the at least one pharmaceutical and the excipient package of the chosen model compound-excipient formulation.

2. A method according to claim 1, wherein the model compound-excipient formulation is saturated in model compound.

3. A method according to claim 1, wherein the parameters further comprise the number of freely rotatable bonds.

4. A method according to claim 1, wherein the parameters further comprise the number of hydrogen bond donors and acceptors.

5. A method according to claim 1, wherein the diffusion is measured utilizing a Franz cell.

8. A method according to claim 6, wherein the diffusion of the at least one model compound is simultaneously measured in a plurality of diffusion cells.

10. A method according to claim 1, wherein at least one model compound-excipient formulation comprises a plurality of different excipients.

11. A method according to claim 1, wherein diffusion is measured utilizing a chemical reaction.

12. A method according to claim 1, wherein at least one membrane comprises a synthetic polymer membrane.

13. A method according to claim 1, wherein at least one membrane comprises skin.

14. A method according to claim 1, wherein at least one membrane is selected from the group consisting of hairless mouse skin, snake skin, pig skin, and cadaver skin.

15. A method according to claim 1, wherein the parameters consist of log(P) and molecular weight.

16. A method according to claim 1, wherein at least one parameter of at least one model compound is calculated.

17. A method according to claim 1, wherein at least one parameter of at least one model compound is experimentally determined.

18. A method according to claim 1, wherein at least one parameter of the pharmaceutical is calculated.

19. A method according to claim 1, wherein at least one parameter of the pharmaceutical is experimentally determined.

20. A method according to claim 1, further comprising: contacting the pharmaceutical composition with the skin of a live mammal; and observing the result.

21. A method according to claim 1, further comprising incorporating the pharmaceutical composition into a transdermal delivery system.

22. A method according to claim 21, further comprising contacting the pharmaceutical composition with the skin of a live mammal and observing the result.

23. A method according to claim 21, wherein the transdermal delivery device comprises an adhesive patch.

24. A method according to claim 1, wherein prior to measuring diffusion of each model compound-excipient formulation, it is incorporated into an adhesive patch.

In the article of Katz et al., entitled, "Percutaneous corticosteroid absorption correlated to partition coefficient," Katz et al. teach aspects of the claimed invention Table 1 (page 593). Table 1 of Katz et al. lists molecular weights and partition coefficients for a plurality of molecules. The molecular weights are deduced from the columns listing the combination of weight by volume concentrations and the molar concentrations. The partition coefficients are listed in the fifth column of data. The compounds listed in Table 1 are of the cortisone family. For the remainder of this Office action, hydrodcortisone is treated as the model compound, while dexamethasone is treated as the pharmaceutical. As stated above, Table 1 of Katz et al. compares the

properties of hydrocortisone, dexamethasone and other related compounds. In particular, size (in the form of molecular weight) and hydrophobicities (in the form of partition coefficients) are compared.

The McKenzie parameter (*p* McK-S_{50}) is calculated in the last column as the negative logarithm of dilution producing vasoconstriction of 50% of subjects while the partition coefficients are experimentally measured.

On page 592, column 2, lines 7-11, Katz et al. state, "McKenzie and Stoughton... prepared dilutions of the corticosteroids in tenfold dilutions ranging from 1:100 to 1:10,000;000; 0.02 ml of these dilutions were applied to 1-in. areas of the forearm and covered with Saran wrap." The requirements of skin of a live mammal are met. The Saran wrap comprises an adhesive patch, and the chemical is in contact with the adhesive patch (the Saran wrap) before it penetrates the skin. This entire system comprises a transdermal delivery system.

There are three aspects of this rejection that Katz et al. fail to teach:

First, Katz et al. do not teach the compound-excipient formulation, the diffusion method and analysis, saturation of the model compound, impact of rotatable and hydrogen bond donors and acceptors, use of a Franz cell(s), a plurality of excipients, utilization of a chemical reaction, use of a synthetic polymer membrane, calculated and empirical parameters of the pharmaceutical, and a transdermal delivery system.

Second, while Katz et al. teach a partition coefficient between ether and water, they do not teach the required partition between octanol and water (log (P) is based on the partition coefficient between octanol and water).

Third, Katz et al. does not teach choosing a model and a pharmaceutical, *which are different compounds*, based on size (molecular weight) and partitioning.

To address the second concern, the article of Tayar et al., entitled, "Partitioning of solutes in different solvent systems: The contribution of Hydrogen-Bonding capacity and polarity," teaches the solvation of 121 solutes in five different solvent systems (octanol-water, heptane-water, chloroform-water, diethyl ether-water, and butyl acetate-water) to tune for a desired comparison of aqueous solvability to lipophilicities [abstract, page 590 and last paragraph, column 2 page 290].

To address the first concern, Loftsson et al. teach a method of making a pharmaceutical composition between hydrocortisone and different cyclodextrins to enhance transdermal delivery. (One of the model compounds listed in Table 1 of Katz et al. is hydrocortisone). Figure 2 of Loftsson et al. teaches a relationship between diffusion through a membrane and cortisone concentration as the combination of the hydrocortisone and each of the cyclodextrins used in the formulation. Figure 2 additionally uses a synthetic polymer membrane (cellophane).

On page 1705 in Loftsson et al. under "Table 1," shows an excess of cyclodextrin concentration used to saturate the hydrocortisone.

Page 1700 of Loftsson et al., lines 21-24, states, "The molar substitution (MS) i.e. the average number of propylene oxide molecules that have reacted with one glucopyranose unit, was 0.6 or 0.9. HPβCD has a very good aqueous solubility (over 60% w/v) and forms stable complexes with many drugs." The HPβCD- hydrocortisone complex is chosen because of their compatibilities in size (i.e. the molecular weight of

the hydrocortisone allows the molecule to fit into the cyclodextrin) and partitioning (i.e. the cyclodextrin is enabled to partition hydrophobically into the molecule). Hydrocortisone is not permeable into the body, but with the aid of the cyclodextrin excipient, is able to penetrate the body (i.e. transdermally). As stated in the abstract, "The influence of 2-hydroypropyl-β-cyclodextrin (HPβCD) on the permeability of hydrocortisone through semi-permeable cellophane membrane and hairless mouse skin was investigated."

In Loftsson et al. on page 1702, the sixth and seventh lines from the bottom of the page state, "Female hairless mice were killed by cervical dislocation, their full-thickness skins removed and placed in the previously described Franz diffusion cells." Thus Franz diffusion cells are used to measure diffusion across hairless mouse skin.

Loftsson et al. teach that the chemical reaction between the cyclodextrin and the hydrocortisone is used to affect the diffusion across the skin.

Loftsson et al. teach that the formulation is chosen from one of two different cyclodextrins employed throughout the study.

In Table 2 of Loftsson et al., the standard deviation of the flux needs to be calculated while the flux is an experimentally measured property.

However, the above sources do not teach choosing a model and a pharmaceutical, *which are different compounds*, based on size (molecular weight) and partitioning. While Loftsson et al. teaches the use of the model compound, Loftsson et al. (1997) teaches the use of the pharmaceutical.

The second study of Loftsson et al. (1997), entitled, "Effect of cyclodextrins on topical drug delivery to the eye," states in its abstract:

> Cyclodextrins are oligosaccharides which form a new group of pharmaceutical excipients. Cyclodextrins have been added to aqueous eye drop preparations to solubilize lipophilic water insoluble drug, to increase chemical stability of drugs, or to reduce local drug irritation in the eye.

Figure 1 of Loftsson et al. (1997) illustrates the HPβCD cyclodextrin while Figure 2 of Loftsson et al. (1997) illustrates the binding of the drug dexamethasone to the HPβCD in order to penetrate layers of the eye and address eye disease through eye drops. Figure 2 of Loftsson et al. (1997) also diagrams the structure of dexamethasone on which a number of rotatable bonds and hydrogen bond donors and acceptors are illustrated. The HPβCD-dexamethasone complex is chosen because of the compatibilities in size (i.e. the molecular weight of the hydrocortisone allows the molecule to fit into the cyclodextrin) and partitioning (i.e. the dexamethasone is enabled to partition hydrophobically into the cyclodextrin).

However, the above sources do not teach choosing a model and a pharmaceutical based on size (molecular weight) and partitioning.

The article of Lipinski et al., entitled "Experimental and computational approaches to estimate solubility and permeability in drug discovery and development settings," states in its abstract:

> Experimental and computational approaches to estimate solubility and permeability in discovery and development settings are described. In the discovery setting 'the rule of 5' predicts that poor absorption or permeation is more likely when there are more than 5 H-bond donors, 10 H-bond acceptors, the molecular weight (MWT) is greater than 500 and the calculated Log P (ClogP) is greater than 5...

Consequently, five characteristics are defined that are used as estimates to select or design potential drugs. In other words, drugs are classified by these ball-park

estimates as an initial determination of their potentials as being effectively delivered to the body. In the case of the instant application, the excipients assist the model compounds in attaining these properties (i.e. the five properties mentioned in the abstract above, including molecular weight and log P)..

It would have been obvious for someone of ordinary skill in the art at the time of the instant invention to modify the general corticosteroid study of Katz et al. by use of the cyclodextrin combination with hydrocortisone (the model compound) of Loftsson et al. by use of the cyclodextrin combination with dexamethasone of Loftsson et al. (1997) by use of the five system partition (including octanol-water) study of Tayar et al. and by use of "the rule of 5" (two of which are molecular weight and log P) of Lipinski et al. because while Katz et al. tabulates the relevant molecular weights and partition coefficients of the compounds of interest, Loftsson et al. teaches the formulation of the model compound-excipient complex for the purpose of understanding transdermal transport phenomena, Loftsson et al. (1997) teaches the formulation of the pharmaceutical-excipient complex for the purpose of ameliorating eye disease, and Lipinski et al. teaches the significance of molecular weight and partition coefficients in the design and selection of drugs. It would be further obvious to adjust the partition study of Katz et al. from water-ether to water-octanol according to the procedures of the study of Tayar et al. for a desired comparison of aqueous solvability with lipophilicities as the two types of partition coefficients are art accepted equivalents (see MPEP section 2144.06).

35 U.S.C. 103 Rejection #2:

Claims 1 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz et al. in view of Tayar et al. in view of Loftsson et al. in view of Loftsson et al. (1997) in view of Lipinski et al. as applied to claims 1-5, 8, and 10-24 above, and further in view of Garcia-Ochoa et al. [Chemistry- A European Journal, 1999, volume 5, pp. 897-901].

Claims 6 and 7 claim the drug formulation method of claim 1, wherein at least one model compound comprises a dye and the diffusion is monitored using fluorescence spectroscopy.

Katz et al. in view of Tayar et al. in view of Loftsson et al. in view of Loftsson et al. (1997) in view of Lipinski et al. as applied to claims 1-5, 8, and 10-24 above fail to disclose any use of fluorescence or fluorescence spectroscopy.

The study of Garcia-Ochoa et al., entitled, "Probing hydrophobic nanocavities in chemical and biological systems with a fluorescent proton-transfer dye," teaches detecting cyclodextrins with fluorescent dyes for better visualization of excited-state intramolecular proton transfer (ESIPT) reactions (see bottom of column 1 on page 897).

The last sentence in the second paragraph of the methods on page 901 of Garcia-Ochoa et al. states, "^{1}H NMR spectra of 10^{-3}M solutions of HPMO [a fluorescent dye] in D_2O in the absence and presence of 10^{-2}M β-CD [cyclodextrin] (almost saturated solution) were recorded at 500 MHz on a Varian Unity spectrometer at 303K..." The use of fluorescence and fluorescent spectroscopy is employed to detect the cyclodextrins.

It would have been obvious for someone of ordinary skill in the art at the time of the instant invention to combine Katz et al. in view of Tayar et al. in view of Loftsson et al. in view of Loftsson et al. (1997) in view of Lipinski et al. as applied to claims 1-5, 8, and 10-24 above and further in view of Garcia-Ochoa et al., for Garcia-Ochoa et al. is an extension of the cyclodextrin study with the use of fluorescence to more effective monitor cyclodextrin concentration and location for purposes such as monitoring of ESIPT reactions.

35 U.S.C. 103 Rejection #3:

Claims 1 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katz et al. in view of Tayar et al. in view of Loftsson et al. in view of Loftsson et al. (1997) in view of Lipinski et al. as applied to claims 1-5, 8, and 10-24 above, and further in view of Colarusso et al. [Biophysical Journal; February 2002; volume 82, pages 752-761].

Claim 8 claims the use of a plurality of diffusion cells.

Claim 9 claims the method of formulating a pharmaceutical composition of claim 1, but adds the limitation of recording an image of diffusion of a model compound.

Katz et al. in view of Tayar et al. in view of Loftsson et al. in view of Loftsson et al. (1997) in view of Lipinski et al. as applied to claims 1-5, 8, and 10-24 above, fail to record any images in their studies.

The article of Colarusso et al., entitled, "Reticulated lipid probe fluorescence reveals MDCK cell apical membrane topography," uses fluorescence and microscopy imaging techniques for a "more clear visualization of apical membrane features."

Colarusso et al. illustrates several fluorescent images of cells and the effects of cyclodextrins on them in Figures 1-4 and 6-7.

It would have been obvious for someone of ordinary skill in the art at the time of the instant invention to combine Katz et al. in view of Tayar et al. in view of Loftsson et al. in view of Loftsson et al. (1997) in view of Lipinski et al. as applied to claims 1-5, 8, and 10-24 above, and further in view of Colarusso et al. because Colarusso et al. use cyclodextrins and fluorescence in analyzing images of cells for a more clear illustration of cellular processes.

Response to Arguments

Applicant's arguments filed 13 December 2006 have been fully considered. New grounds of rejection have been applied based on amendments to the claims filed by applicants on 13 December 2006.

Regarding prior art rejections, applicant first argues on page 8 of the Remarks of 13 December 2006 that the prior art does not teach a difference between the model compound and pharmaceutical as dictated by the newly amended claim 1. In response, a new grounds of rejection is applied in which hydrocortisone fulfills the role of a model compound and dexamethasone fulfills the role of a pharmaceutical. The definition provided by the application of "model compound" does not negate the possibility that the

model compound could have the potential to act as a pharmaceutical. In this case, hydrocortisone is the model compound with the potential to act as a pharmaceutical, wherein this potential is not utilized in the relevant prior art.

Applicant next argues on page 9 of the Remarks of 13 December 2006 that the Katz et al. reference does not teach octanol-water partition coefficients. In response, Katz et al. does teach ether-water partition coefficients while Tayar et al. teaches octanol-water coefficients. The motivation to combine these references are that they are art accepted equivalents. A stated in section 2144.06 of the MPEP:

> In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on applicant's disclosure or the mere fact that the components at issue are functional or mechanical equivalents. In re Ruff, 256 F.2d 590, 118 USPQ 340 (CCPA 1958).

In this instance, both octanol-water and ether-water mixtures are used for the equivalent purpose (partitioning between an aqueous and an organic phase). The prior art of Tayar et al. clarifies the equivalent functions of the two solvent systems by illustrating in Table 1 on page 592 the qualitatively equivalent functions of five systems of solutions, including ether-water and octanol-water.

Applicant next argues on page 9 of the Remarks of 13 December 2006 that the amended section of instant claim 1 are not taught in the obviousness prior art rejections. In response, the new grounds of rejections take into account the newly amended sections of the claims.

Applicant next argues on page 9 of the Remarks of 13 December 20006 that the freely rotatable bonds and the number of hydrogen bond donor and acceptors is not of the cyclodextrin but instead of the compound. In response, the structure of

dexamethasone is shown in Figure 2 of Loftsson et al. (1997), and it is interpreted that hydrocortisone has an analogous structure in order to fit into the same HPβCD cyclodextrin molecule.

Applicant argues on page 9 of the Remarks of 13 December 2006 the newly amended. closed language in claim 1 of "consist of" overcomes the prior art of record. However, the closed language "consist of" is followed by "consists of at least," and is interpreted to be open.

Applicant argues on page 10 and 11 of the Remarks of 13 December 2006 that the second and third obviousness prior art rejections should be withdrawn because the initial obviousness prior art rejection is improper. For the reasons discussed above, all of the prior art rejections are sustained based on the new grounds of rejection.

Conclusion

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the central PTO Fax Center. The faxing of such pages must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center Number is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Negin, Ph.D., whose telephone number is (571) 272-1083. The examiner can normally be reached on Monday-Friday from 7am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Irem Yucel, Supervisory Patent Examiner, can be reached at (571) 272-0781.

Information regarding the status of the application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information on the PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RSN
12 March 2007

12 March 2007

JOHN S. BRUSCA, PH.D
PRIMARY EXAMINER